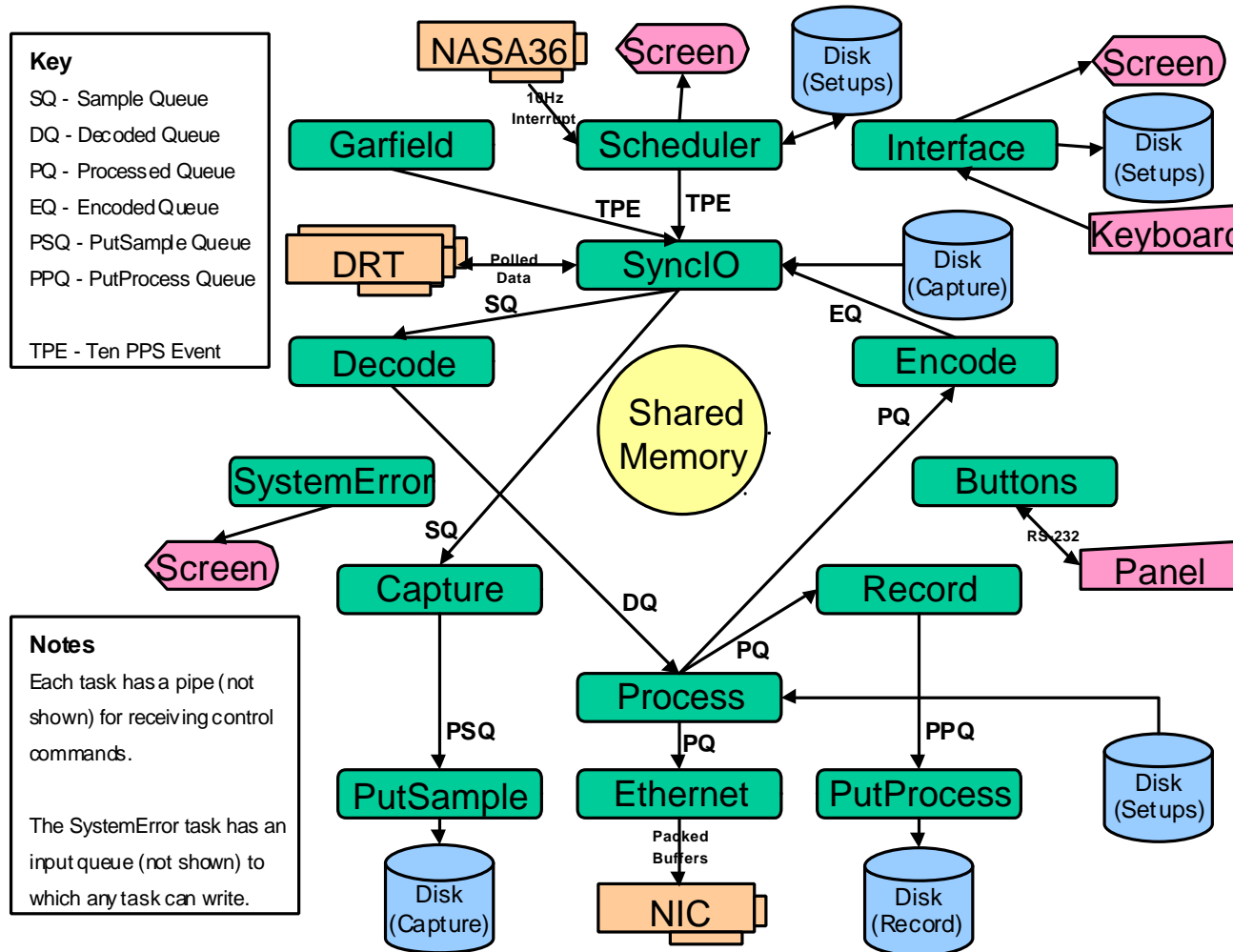


RADAC

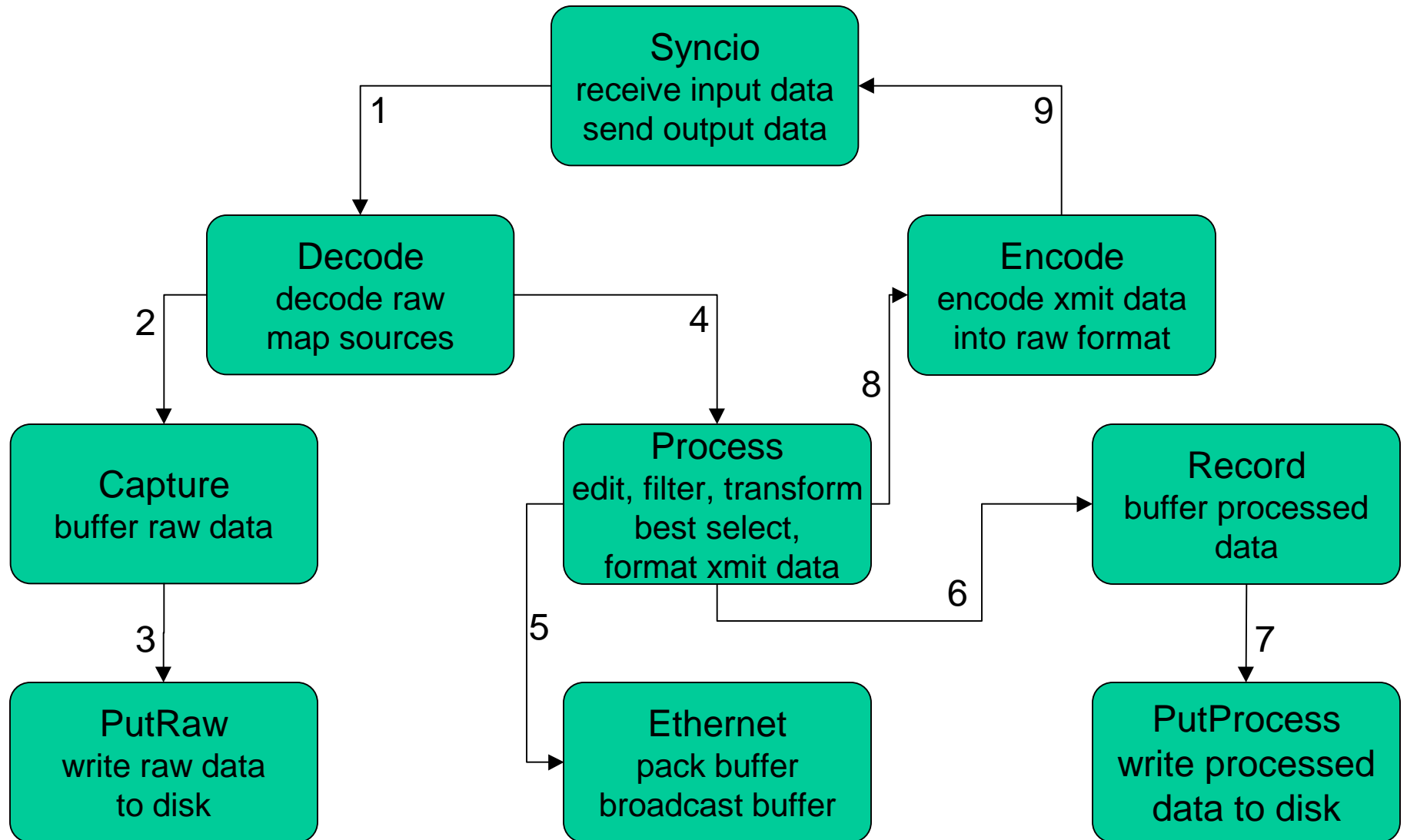
The Next Generation

PCGDS Porting

PCGDS/PCDQS Data Flow



Processing Cycle



RADAC The Next Generation	<h1>Task Details</h1>	PCGDS Porting
<div data-bbox="226 354 1346 418"> <h2>Port PCGDS to a new operating system</h2> </div> <div data-bbox="317 459 1856 1360"> <ul style="list-style-type: none"> •Original Environment <ul style="list-style-type: none"> •Microsoft MS-DOS and Talton Louley TL Executive (TLX) operating system(s) •PC-TCP socket library from FTP Software •3rd party text windowing libraries •WFF libraries for data IO and data format manipulation •Textual user interface •Destination Environment <ul style="list-style-type: none"> •Microsoft Windows NT operating system •WFF libraries for data IO and data format manipulation •Textual or Graphical User Interface </div>		
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Porting Considerations

- Most of the code is ANSI C and should port smoothly
- TLX calls should be able to be rewritten using NT facilities
- PC/TCP socket calls are standard and should port to NT easily
- WFF PCI and GP libraries have been ported to NT already
- Interrupt driven com port IO should port to NT serial port calls
- User interface will need to be replaced with NT coding

Source Code Metrics

PCGDS Process	Lines of Source Code	% Lines of Source Code	Lines of Comment/ Blank	% Lines of Comment/ Blank	Total Logical Lines	% of System Code
Buttons	2474	34	4874	66	7348	14.1
Capture	172	34	341	66	513	1.0
PutSampl	300	37	505	63	805	1.5
CRS lib	86	35	159	65	245	0.5
Decode	482	45	598	55	1080	2.1
Encode	171	33	355	67	526	1.0
Ethernet	532	35	979	65	1511	2.9
FIL lib	275	16	1427	84	1702	3.3
Garfield	240	36	434	64	674	1.3
GP lib	3119	34	5949	66	9068	17.4
Headers	499	25	1490	75	1989	3.8
Intrface	1961	40	2959	60	4920	9.5
PCI lib	2348	34	4531	66	6879	13.2
Process	4599	56	3649	44	8248	15.9
Record	171	34	337	66	508	1.0
PutPrc	326	36	581	64	907	1.7
Schedule	1530	39	2346	61	3876	7.5
SyncIO	354	42	485	58	839	1.6
SysError	119	36	216	64	335	0.6
Total	19758	38	32215	62	51973	100.0

RADAC The Next Generation	<h2 style="text-align: center;">Porting Hurdles</h2>	PCGDS Porting
	<ul style="list-style-type: none"> • Replaced DOS memory model string copy with standard string copy • Changed name of disk info function and data structure to NT name • Changed name of compiler include file 'mem.h' to 'memory.h' • Changed name of OS constants (MAXPATH to _MAX_PATH, etc) • Changed name of OS function (matherr to _matherr) • Replaced PCTCP socket headers with NT winsock header • Renamed socket functions to NT equivalents • Replaced outdated socket calls (bcopy, bzero with memcpy, memset) • Complete rewrite of user interface using MFC and wizards • Conversion of Interprocess Communications (IPC) facilities (pipes, queues, events, locks, shared memory) to NT equivalents • Conversion of process control (spawn, kill) to NT equivalents 	
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RADAC The Next Generation	<h2 style="text-align: center;">Current Status</h2>	PCGDS Porting
	<ul style="list-style-type: none"> •Projects created for and source code compiled for: <ul style="list-style-type: none"> •SyncIO, Decode, Capture, PutSample •Process, Record, PutProcess •Encode, Ethernet, Garfield, •COORS library, FILE library •Interface process is being rewritten as GUI using MFC •IPC facilities being converted <ul style="list-style-type: none"> •shared memory •queue 	
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